IPC924 Series
Industrial & Fanless Computers
User's Manual

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Oct 2011, Version A2
Printed in Taiwan

Safety Precautions

Before getting started, please read the following important safety precautions.

1. The **IPC924 Series** does not come equipped with an operating system. An operating system must be loaded first before installing any software into the computer.
2. Be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and place all electronic components in any static-shielded devices. Most electronic components are sensitive to static electrical charge.
3. Disconnect the power cord from the **IPC924 Series** before making any installation. Be sure both the system and the external devices are turned OFF. Sudden surge of power could ruin sensitive components. Make sure the **IPC924 Series** is properly grounded.
4. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
5. Turn OFF the system power before cleaning. Clean the system using a cloth only. Do not spray any liquid cleaner directly onto the screen.
6. Do not leave this equipment in an uncontrolled environment where the storage temperature is below -20℃ or above 80℃. It may damage the equipment.
7. Do not open the system's back cover. If opening the cover for maintenance is a must, only a trained technician is allowed to do so. Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:
   - Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.
   - When handling boards and components, wear a wrist-grounding strap, available from most electronic component stores.

Classification

1. Degree of production against electric shock: not classified
2. Degree of protection against the ingress of water: IPX0
3. Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
4. Mode of operation: Continuous
5. Type of protection against electric shock: Class I equipment

General Cleaning Tips

You may need the following precautions before you begin to clean the computer. When you clean any single part or component for the computer, please read and understand the details below fully.

When you need to clean the device, please rub it with a piece of dry cloth.

1. Be cautious of the tiny removable components when you use a vacuum cleaner to absorb the dirt on the floor.
2. Turn the system off before you start to clean up the component or computer.
3. Never drop the components inside the computer or get circuit board damp or wet.
4. Be cautious of all kinds of cleaning solvents or chemicals when you use it for the sake of cleaning. Some individuals may be allergic to the ingredients.
5. Try not to put any food, drink or cigarette around the computer.

Cleaning Tools:

Although many companies have created products to help improve the process of cleaning your computer and peripherals users can also use household items to clean their computers and peripherals. Below is a listing of items you may need or want to use while cleaning your computer or computer peripherals.

Keep in mind that some components in your computer may only be able to be cleaned using a product designed for cleaning that component, if this is the case it will be mentioned in the cleaning.

- Cloth: A piece of cloth is the best tool to use when rubbing up a component. Although paper towels or tissues can be used on most hardware as well, we still recommend you to rub it with a piece of cloth.
- Water or rubbing alcohol: You may moisten a piece of cloth a bit with some water or rubbing alcohol and rub it on the computer. Unknown solvents may be harmful to the plastics parts.
- Vacuum cleaner: Absorb the dust, dirt, hair, cigarette particles, and other particles out of a computer can be one of the best methods of cleaning a computer. Over time these items can restrict the airflow in a computer and cause circuitry to corrode.
- Cotton swabs: Cotton swaps moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas in your keyboard, mouse, and other locations.
- Foam swabs: Whenever possible it is better to use lint free swabs such as foam swabs.

Note *It is strongly recommended that you should shut down the system before you start to clean any single components.*

Please follow the steps below:

1. Close all application programs
2. Close operating software
3. Turn off power switch
4. Remove all device
5. Pull out power cable

Scrap Computer Recycling

If the computer equipments need the maintenance or are beyond repair, we strongly recommended that you should inform your Axiomtek distributor as soon as possible for the suitable solution. For the computers that are no longer useful or no longer working well, please contact your Axiomtek distributor for recycling and we will make the proper arrangement.

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MEMO:

CHAPTER 1
INTRODUCTION

This chapter contains general information and a detailed specification of the **IPC924 Series**. Chapter 1 includes the following sections:

- **General Description**
- **System Specification**
- **Dimensions**
- **I/O Outlets**
- **Package List**

1.1 General Description

The **IPC924 Series** is a fanless system that can support Intel® Atom™ D425/D525 processors. The **IPC924 Series** supports Windows® XP, and Windows® XP embedded Vista, and Fedora, suitable for the most endurable operation.

Embedded O.S. Supported

The IPC924 Series not only supports Windows® XP, but also supports embedded OS, such as Windows® XP embedded. For storage device, the IPC924 Series supports one 2.5" HDD driver bay and one onboard CompactFlash™ socket.

1.2 System Specifications

1.2.1 Main CPU Board

- **CPU**
  - Intel® Atom™ D425/D525 processors
- **System Chipset**
  - Intel® ICH8M chipset
- **BIOS**
  - AMI BIOS, with Smart View and Customer CMOS Backup.
- **System Memory**
  - One 204-pin DDR3 SODIMM up to 4GB
- **Features**
  - Fanless Operation
  - Compact & Front IO design
  - Supports Four expansion slots
  - DC to DC power supply support 10V to 30V
  - Fanless & ventilation-free

1.2.2 I/O System

- **Standard I/O Interface -- Front**
  - ATX power on/off switch
  - One 2-pin connector output for remote power on/off switch
  - 10VDC to 30VDC with phoenix power plug or External 150W AC Adapter
  - Six USB 2.0 ports
  - HDD access/Power LEDs
  - Three RS232(COM 2/3/4)
  - One RS232/422/485(COM 1)
  - One VGA connector
  - One G.E LAN port
- **Expansion Slot**
  - HAB104: Four PCI
  - HAB105: Two PCI & One PCIex1 & One PCIex16

NOTE *There is no PICex16 signal, but we have x1 signal through PCIex16 golden figner that user can use x1/x4 PCIe card on PCIex16 slot.*

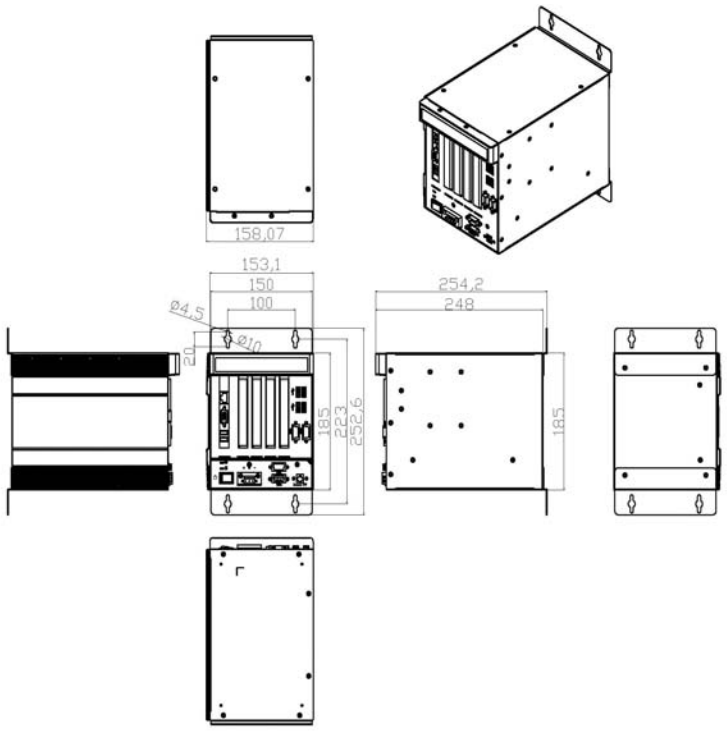
1.2.3 System Specification

- **Drive Capacity**
  - Supports One 2.5" HDD driver bay
  - One onboard CompactFlash™ Socket
- **Power Input**
  - 10VDC to 30VDC with phoenix power plug
  - External 150W AC Adapter
    - Power Input : 100VAC to 240VAC
    - Power Output : +19VDC@7.89A
- **Operation Temperature**
  - Ambient with air flow: 0℃ ~ 45℃
- **Storage Temperature**
  - -20℃ ~ 80℃
- **Humidity**
  - 10% ~ 90% (Non-condensing)
- **Dimensions**
  - 158mm (5.6") (W) x 248 mm (9.7") (D) x 185mm (7.3") (H)

NOTE *All specifications and images are subject to change without notice.*

1.3 Dimensions

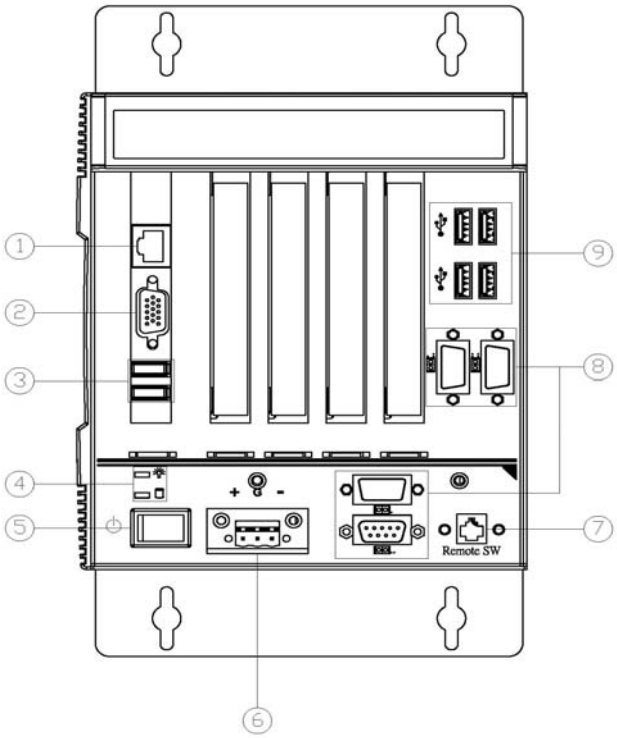
The following diagrams show you dimensions and outlines of the **IPC924 Series**.



1.4 I/O Outlets

The following figures show you I/O outlets on front and rear panels of the **IPC924 Series**.

Front Panel



1. Ethernet x 1
2. VGA Port
3. USB 2.0 x 2
4. LED for Power & HDD
5. ATX Power Switch
6. Power Connector (Din-Jack or Phoenix Plug)
7. Remote power switch
8. RS-232(COM2/3/4)(Optinal:user can use COM2 as a CAN BUS Module)
   RS-232/422/485(COM1)
9. USB 2.0 x 4

1.5 Jumper Settings

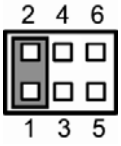
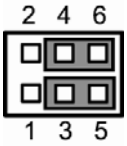
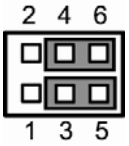
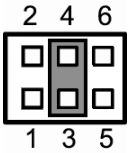
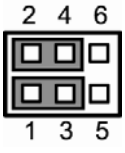
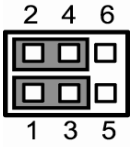
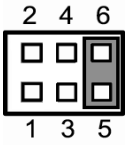
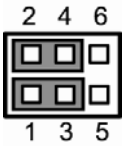
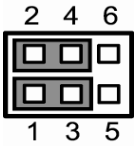
The IPC924 has a number of jumpers inside the chassis that allow you to configure your system to suit your application. The table below lists the functions of the various jumpers.

Jumper	Description	Jumper Setting
JP1	COM1 RS-232/422/485 setting Default：RS-232	Short 1-2
JP2	COM1 RS-232/422/485 setting Default：RS-232	Short 3-5、4-6
JP3	COM1 RS-232/422/485 setting Default：RS-232	Short 3-5、4-6
JP4	HD Audio Line Out / Speaker Out Select Default：Line Out	Short 1-3、2-4
JP5	COM2 Data/Power Mode Select Default：RS-232 Data	Short 7-9、8-10
JP6	COM1 Data/Power Mode Select Default：Standby Power Mod	Short 7-9、8-10
JP7	CMOS Clear Default：Normal Operation	Short 1-2
JP8	Power On Control Mode Default：Power On control by Front Panel Connector	Short 1-2
JP10	USB 4,5 Port Power(5V) Selection Default：Standby Power Mode	Short 2-3
JP11	CompactFlash™ Type Selection Default：3.3V type CompactFlash™ Support	Short 1-2
JP12	USB 0,1 Port Power(5V) Selection Default：Main Power Mode	Short 1-2

Jumper	Description	Jumper Setting
JP13	LVDS LCD Type Support Selection Default：3.3V type LVDS LCD Support	Short 1-2
JP14	USB 2,3 Port Power(5V) Selection Default：Standby Power Mode	Short 2-3

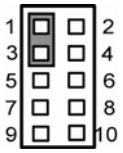
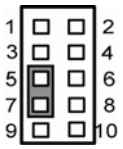
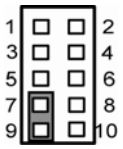
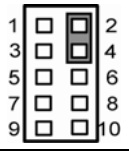
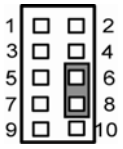
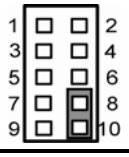
COM1 RS-232/422/485 Mode Select (JP1, JP2, JP3)

These jumpers select the communication mode of COM1 port to operate RS-232 or RS-422 or RS-485. When these jumpers are selected to operate RS-422 or RS485, please make sure the COM1 is on Data mode.

Function	Jumper Setting		
	JP1	JP2	JP3
RS-232 (Default)			
RS-422			
RS-485			

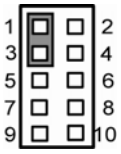
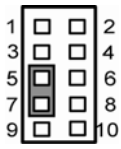
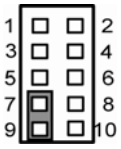
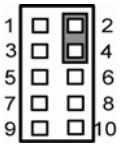
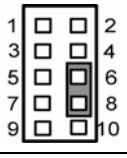
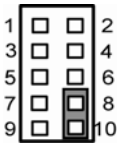
COM1 Data / Power Mode Selection (JP6)

The COM1 port have +5V or +12V level power capability on DCD and +5V or +12V level power capability for RI, depending on the JP6 setting.

Function	Jumper Setting
COM1 Pin 1 is +12V level	
COM1 Pin 1 is +5V level	
COM1 Pin1 is DCD (Default)	
COM1 Pin 8 is +12V level	
COM1 Pin 8 is +5V level	
COM1 Pin 8 is RI (Default)	

COM2 Data / Power Mode Selection (JP5)

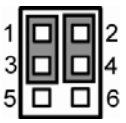
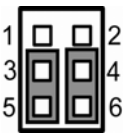
The COM2 port have +5V or +12V level power capability on DCD and +5V or +12V level power capability for RI, depending on the JP5 setting.

Function	Jumper Setting
COM2 Pin 1 is +12V level	
COM2 Pin 1 is +5V level	
COM2 Pin 1 is DCD (Default)	
COM2 Pin 8 is +12V level	
COM2 Pin 8 is +5V level	
COM2 Pin 8 is RI (Default)	

NOTE: If you are using COM2 as a CAN Bus module, please refer to Appedix A.

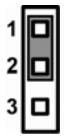
HD Audio Line Out / Speaker Out Select (JP4)

This jumper is to select which source for the audio output (CN3). When the Speaker Out is set, it delivers 2W/channel continuous into 8 Ohm loads.

Function	Jumper Setting
Line Out (Default)	
Speak Out with Amplifier	

CMOS Clear (JP7)

You may need to use this jumper is to clear the CMOS memory if incorrect settings in the Setup Utility.

Description	Function	Jumper Setting
CMOS Clear	Normal (Default)	**JP7** 
	Clear CMOS	**JP7**

Power On Control Mode (JP8)

The Power On Control mode provides two kinds of power on mode as follows,

Function	Jumper Setting
Power On control by Front Panel Connector (Default)	
Power On control by Power Supply	

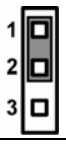
USB0,1/USB2,3/USB4,5 Port Power Selection (JP12,JP14,JP10)

USB Power provides two kinds of mode as follows:

- Main power Mode:
  USB device has power only when system power is on.
- Standby Power Mode:
  USB device has power on both standby and power-on.

Function	Jumper Setting
Main Power Mode (Default)	
Standby Power Mode	

CompactFlashTM Type Selection (JP11)

Function	Jumper Setting
3.3V type CompactFlash™ support (Default)	
5V type CompactFlash™ support	

LVDS LCD Type Support Selection (JP13)

The board supports 3.3V or 5V type LCD displays.

Function	Jumper Setting
3.3V type LVDS LCD support (Default)	
5V type LVDS LCD support	

1.6 Packing List

The package bundled with your **IPC924 Series** should contain the following items:

- IPC924 Series Unit x 1
- 19V 150W Adapter & US Power Cord (for IPC924 AC Version)
- Driver CD
- Quick Manual
- Wall Mount Bracket x 2
- HD Bracket x 1
- Screw pack x 1
- Food pad x 4

If you can not find this package or any items are missing, please contact Axiomtek distributors immediately.

CHAPTER 2
HARDWARE INSTALLATION

The **IPC924 Series** are convenient for your various hardware configurations, such as Memory Module, HDD (Hard Disk Drive) and PCIe card. The chapter 2 will show you how to install the hardware. It includes:

2.1 Installing the memory module

Step 1 Turn off the system.

Step 2 Disconnect the power connector.

Step 3 Loosen screws to remove the top cover from the chassis

Step 4 Please follow steps below to install the memory module:

1. Align the memory module with the socket that notches of memory module must match the socket keys for a correct installation.

2. Install the memory module into the socket and push it firmly down until it is fully seated. The socket latches are clipped on to the edges of the SO-DIMM.

Step 5 Put back the top cover to the chassis and fasten all screws.

2.2 Installing the Hard Disk Drive

The **IPC924 Series** offers a convenient drive bay module for users to install HDD. The system offers users one 2.5" Hard Disk Drive for installation. Please follow the steps:

Step 1 Turn off the system.

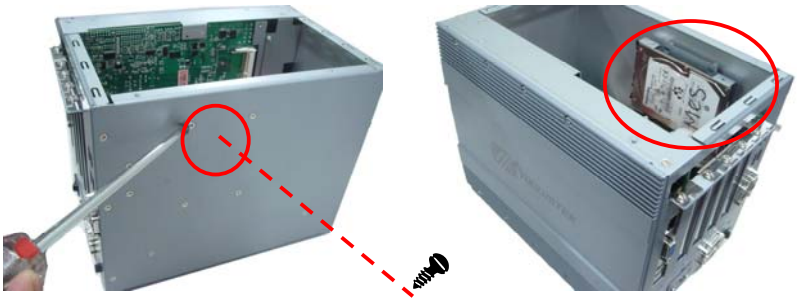
Step 2 Disconnect the power connector.

Step 3 Loosen screws to remove the top cover from the chassis.

Step 4 Open the top cover and locate the Hard Disk Drives from the side.

Step 5 Use assembly parts to fix HDD with the bracket.

Step 6 Install and fix the HDD through the side, next, plug the power cable in HDD.



Step 7 Close the top cover back to the chassis and fasten all screws.

2.3 Installing the PCI or PCIe Card

Step 1 Turn off the system.

Step 2 Disconnect the power connector.

Step 3 Loosen screws to remove the top cover from the chassis. Removing the PCI or PCIe bracket by releasing the button as marked.

Step 4 Locate the PCI or PCIe slots from the top.

Step 5 Align the PCI or PCIe card with the slot, and press the card into the slot until it is firmly seated.

Step 6 Close the top cover back to the chassis and fasten all screws.

CHAPTER 3
AMI BIOS UTILITY

This chapter provides users with detailed description how to set up basic system configuration through the AMIBIOS8 BIOS setup utility.

3.1 Starting

To enter the setup screens, follow the steps below:

1. Turn on the computer and press the <Del> key immediately.

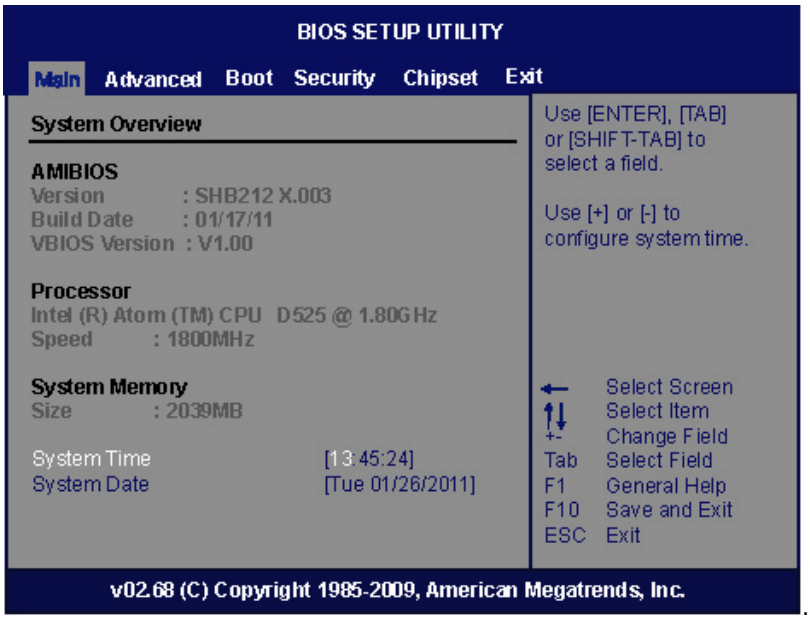
After you press the <Delete> key, the main BIOS setup menu displays. You can access the other setup screens from the main BIOS setup menu, such as the Chipset and Power menus.

3.2 Navigation Keys

←→ Left/Right	The Left and Right <Arrow> keys allow you to select a setup screen.
↑↓ Up/Down	The Up and Down <Arrow> keys allow you to select a setup screen or sub-screen.
+– Plus/Minus	The Plus and Minus <Arrow> keys allow you to change the field value of a particular setup item.
Tab	The <Tab> key allows you to select setup fields.
F1	The <F1> key allows you to display the General Help screen.
F10	The <F10> key allows you to save any changes you have made and exit Setup. Press the <F10> key to save your changes.
Esc	The <Esc> key allows you to discard any changes you have made and exit the Setup. Press the <Esc> key to exit the setup without saving your changes.
Enter	The <Enter> key allows you to display or change the setup option listed for a particular setup item. The <Enter> key can also allow you to display the setup sub- screens.

3.3 The Main Menu

When you first enter the Setup Utility, you will enter the Main setup screen. You can always return to the Main setup screen by selecting the Main tab. There are two Main Setup options. They are described in this section. The Main BIOS Setup screen is shown below.



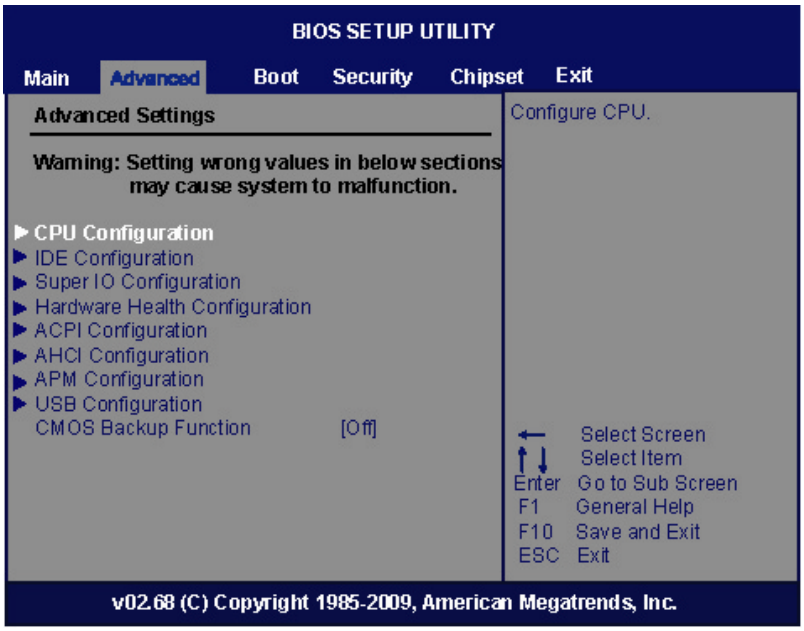
- **System Time / Date**
  Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time is entered in HH:MM:SS format.

3.4 Advanced BIOS Features

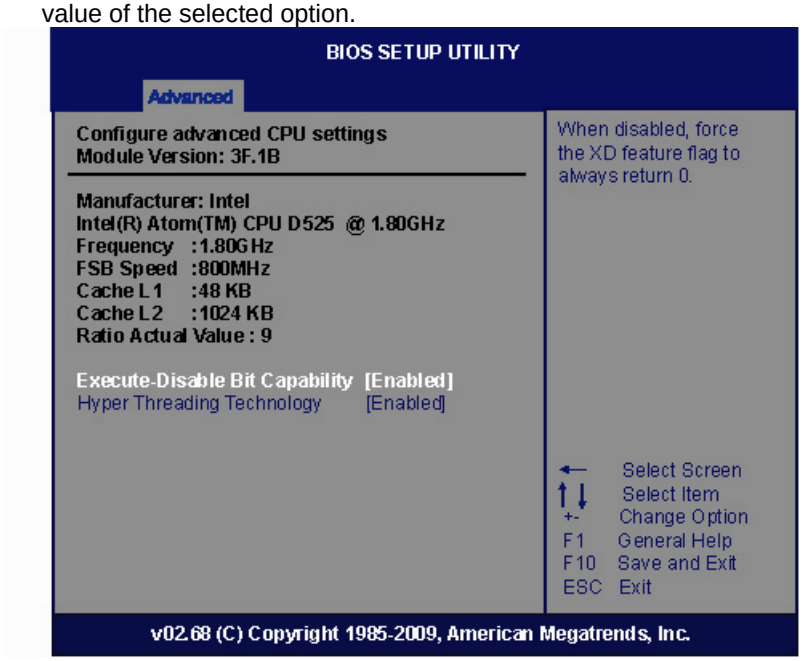
The Advanced menu allows users to set configuration of the CPU and other system devices. You can select any of the items in the left frame of the screen to go to the sub menus:

- CPU Configuration
- IDE Configuration
- SuperIO Configuration
- Hardware Health Configuration
- ACPI Configuration
- AHCI Configuration
- APM Configuration
- USB Configuration

For items marked with "►", please press <Enter> for more options.



- **CPU Configuration**
  This screen shows the CPU Configuration, and you can change the value of the selected option.

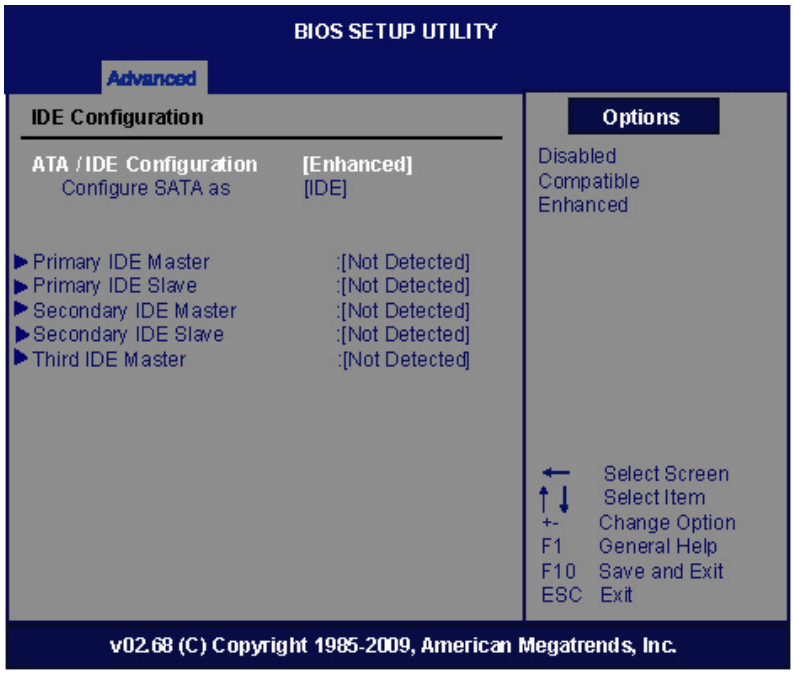


  - **Execute-Disable Bit Capability**
    This item helps you enable or disable the No-Execution Page Protection Technology.

  - **Hyper Threading Technology**

    Use this item to enable or disable Hyper-Threading Technology, which makes a single physical processor perform multi-tasking function as two logical ones

- **IDE Configuration**
  You can use this screen to select options for the IDE Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen. For items marked with "▶", please press <Enter> for more options.

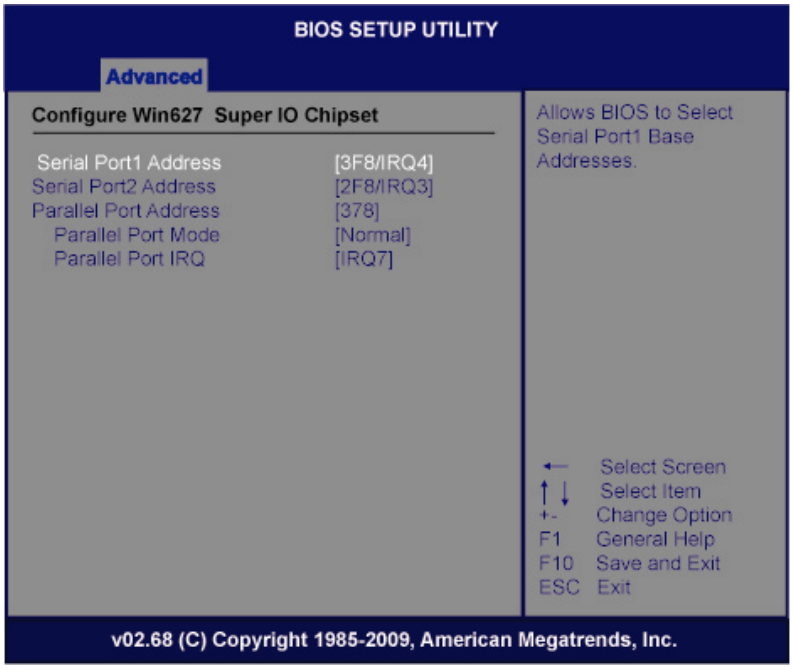


  - **ATA/IDE Configuration**
    Use this item to specify the integrated IDE controller. There are three options for your selection: *Disabled, Compatible* and *Enhanced*.

  - **Primary/Secondary /Third IDE Master/Slave**
    Select one of the hard disk drives to configure IDE devices installed in the system by pressing <Enter> for more options.
    Select one of the hard disk drives to configure IDE devices installed in the system by pressing <Enter> for more options.

- **SuperIO Configuration**

  You can use this screen to select options for the SuperIO Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen.



  - **OnBoard Floppy Controller**

    Use this item to enable or disable the onboard floppy drive controller.

  - **Serial Port1 Address**

    This item specifies the base I/O port address and Interrupt Request address of serial port 1. The Optimal setting is *3F8/IRQ4*. The Fail-Safe default setting is *Disabled*.

- **Serial Port2 Address**
  This item specifies the base I/O port address and Interrupt Request address of serial port 2. The Optimal setting is *2F8/IRQ3*. The Fail-Safe setting is *Disabled*.

- **Parallel Port Address**

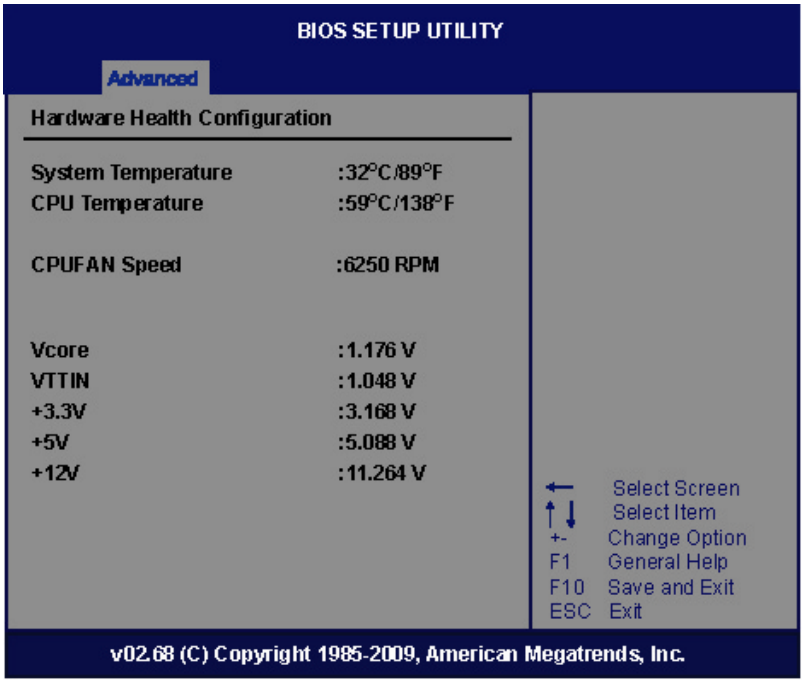
  This item allows you to determine the I/O address for onboard parallel port. There are several options for your selection.

- **Parallel Port Mode**

  Select an operating mode for the onboard parallel (printer) port.

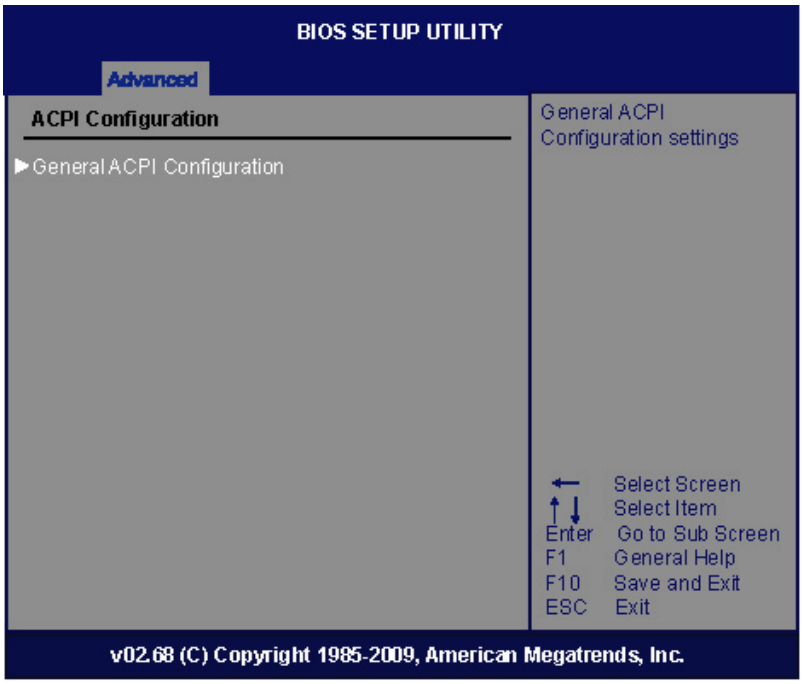
- **Parallel Port IRQ**
  Use this item to set up the IRQ for onboard parallel port.

- **Hardware Health Configuration**
  This screen shows the Hardware Health CPU Configuration, and a description of the selected item appears on the right side of the screen.

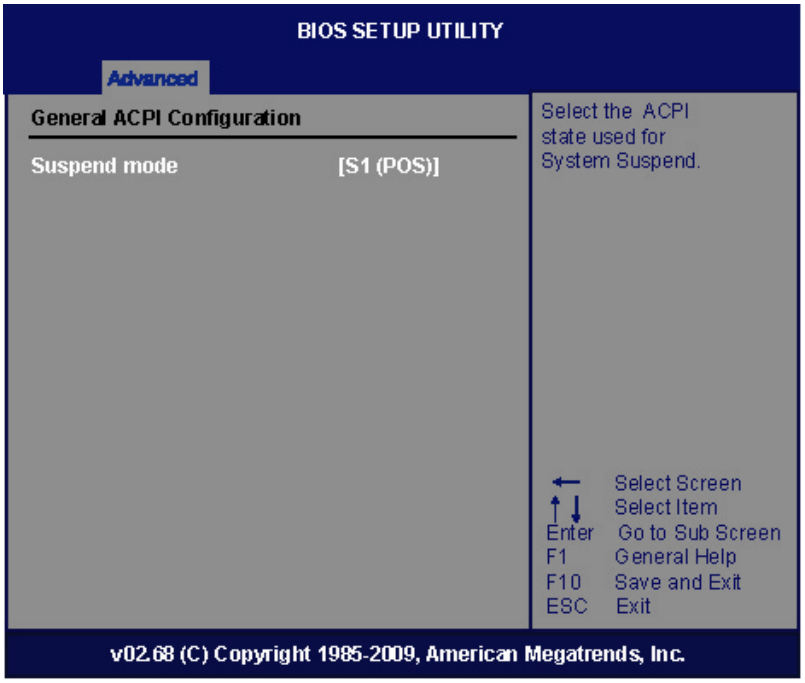


  - **SYS FAN/CPU FAN/AUX FAN Mode Setting**
    These items display the temperature of CPU and System, Vcore, etc

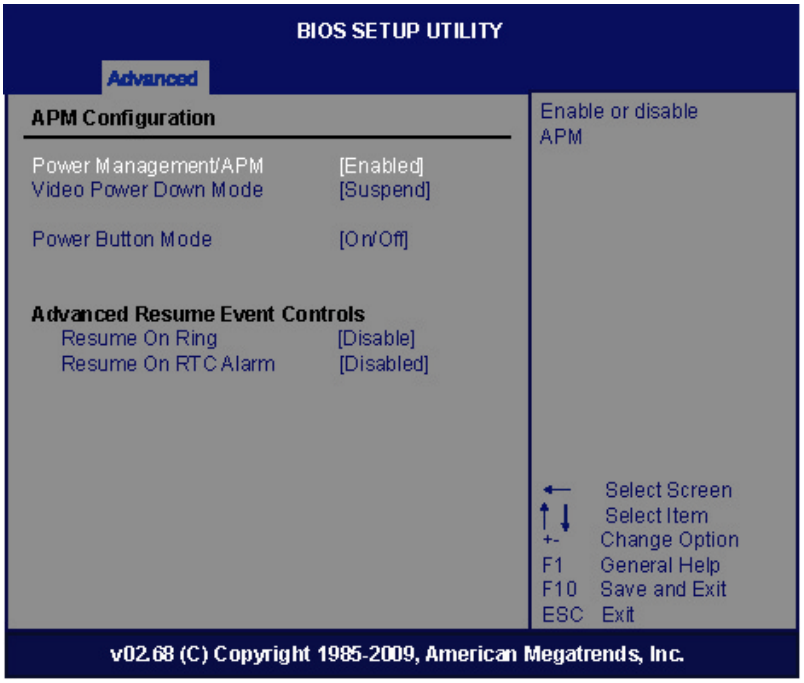
- **ACPI Configuration**
  You can use this screen to select options for the ACPI Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen.



- **General ACPI Configuration**
  Scroll to this item and press <Enter> to view the General ACPI Configuration sub menu, which contains General ACPI (Advanced Configuration and Power Management Interface) options for your configuration.



- **APM Configuration**
  You can use this screen to select options for the APM Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen.



  - **Power Management**
    Set this value to allow Power Management/APM support. The default setting is *Enabled*.

Disabled	Set this value to prevent the chipset power management and APM (Advanced Power Management) features.
Enabled	Set this value to allow the chipset power management and APM (Advanced Power Management) features. This is the default setting.

- **Power Button Mode**
  This option specifies how the externally mounted power button on the front of the computer chassis is used. The default setting is *On/Off*.

On/Off	Pushing the power button turns the computer on or off. This is the default setting. This is the default setting.
Standby	Pushing the power button places the computer in Standby mode.
Suspend	Pushing the power button places the computer in Suspend mode or Full On power mode.

- **Video Power Down Mode**
  This option specifies the Power State that the video subsystem enters when the BIOS places it in a power saving state after the specified period of display inactivity has expired. The default setting is *Suspend*.

Disabled	This setting prevents the BIOS from initiating any power saving modes concerned with the video display or monitor.
Standby	This option places the monitor into standby mode after the specified period of display inactivity has expired. This means the monitor is not off. The screen will appear blacked out. The standards do not cite specific power ratings because they vary from monitor to monitor.
Suspend	This option places the monitor into suspend mode after the specified period of display inactivity has expired. This means the monitor is not off. The screen will appear blacked out. The standards do not cite specific power ratings because they vary from monitor to monitor, but this setting use less power than Standby mode. This is the default setting.

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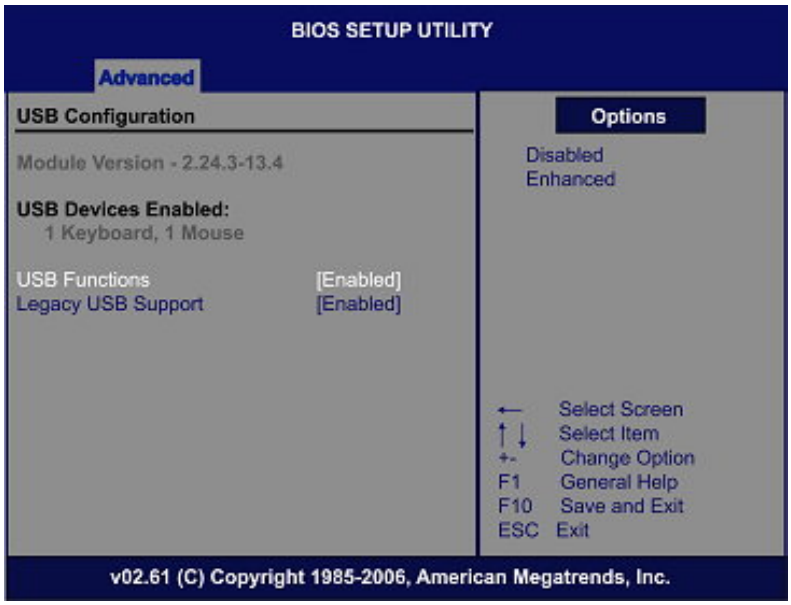
- **Hard Disk Drive Power Down Mode**
  This option specifies the power conserving state that the hard disk drive enters after the specified period of hard drive inactivity has expired. The default setting is *Suspend*.

Disabled	This setting prevents hard disk drive power down mode.
Standby	This option stops the hard disk drives from spinning during a system standby.
Suspend	This option cuts the power to the hard disk drives during a system suspend. This is the default setting.

- **Throttle Slow Clock Ratio**
  Use this item to specify the speed of the system clock when running the power saving states.
- **System Thermal**
  Use this item to enable or disable the function of system temperature control.
- **Resume On Ring**
  This item enables or disables the function of Resume on Ring that resume the system through incoming calls.
- **Resume On RTC Alarm**

  You can set "Resume On RTC Alarm" item to enabled and key in Data/time to power on system.

- **USB Configuration**
  You can use this screen to select options for the USB Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen.



  - **USB Functions**
    This item allows you to enable or disable USB functions.
  - **Legacu USB Support**

    Use this item to enable or disable support for USB device on legacy operating system. The default setting is Enabled

3.5 Boot Menu

The Boot menu allows users to change boot options of the system. You can select any of the items in the left frame of the screen to go to the sub menus:

Boot Settings Configuration

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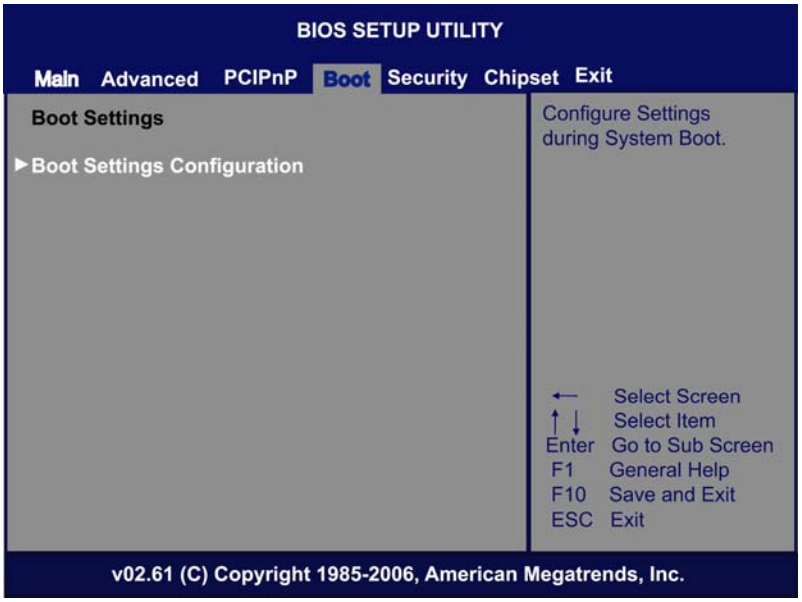
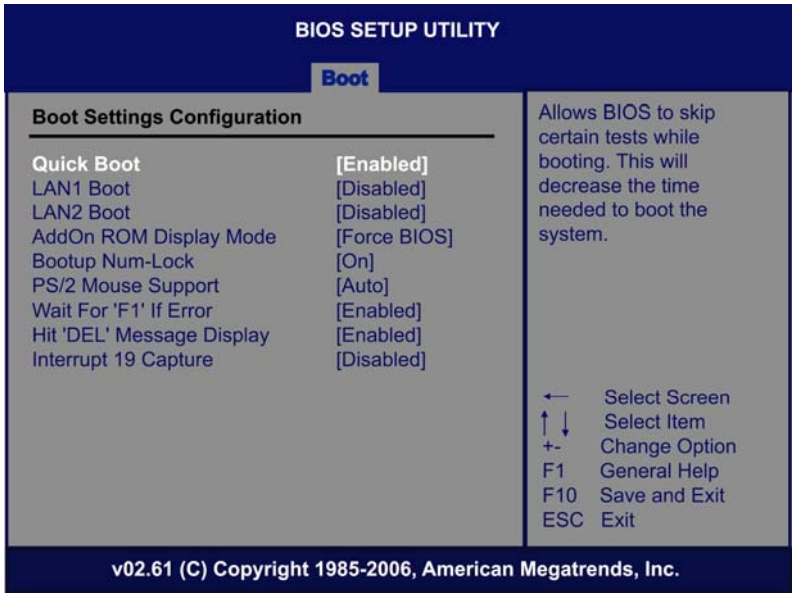
For items marked with "►", please press <Enter> for more options.


BIOS SETUP UTILITY
Main Advanced PCIPnP Boot Security Chipset Exit
Boot Settings
►Boot Settings Configuration
Configure Settings during System Boot.
← Select Screen
↑ ↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
v02.61 (C) Copyright 1985-2006, American Megatrends, Inc.

- **Boot Settings Configuration**


BIOS SETUP UTILITY
Boot
Boot Settings Configuration
Quick Boot [Enabled]
LAN1 Boot [Disabled]
LAN2 Boot [Disabled]
AddOn ROM Display Mode [Force BIOS]
Bootup Num-Lock [On]
PS/2 Mouse Support [Auto]
Wait For 'F1' If Error [Enabled]
Hit 'DEL' Message Display [Enabled]
Interrupt 19 Capture [Disabled]
Allows BIOS to skip certain tests while booting. This will decrease the time needed to boot the system.
← Select Screen
↑ ↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
v02.61 (C) Copyright 1985-2006, American Megatrends, Inc.

  - **Quick Boot**
    Enabling this item lets the BIOS skip some power on self tests (POST). The default setting is *Enabled*.
  - **LAN1 Boot**
    Use these items to enable or disable the Boot ROM function of the onboard LAN chip when the system boots up.
  - **AddOn ROM Display Mode**
    This item selects the display mode for option ROM. The default setting is *Force BIOS*.
  - **Boot Num-Lock**
    Use this item to select the power-on state for the NumLock. The default setting is *On*.
  - **Wait For 'F1' Of Error**
    If this item is enabled, the system waits for the F1 key to be pressed when error occurs. The default setting is *Enabled*.
  - **Hit 'DEL' Message Display**

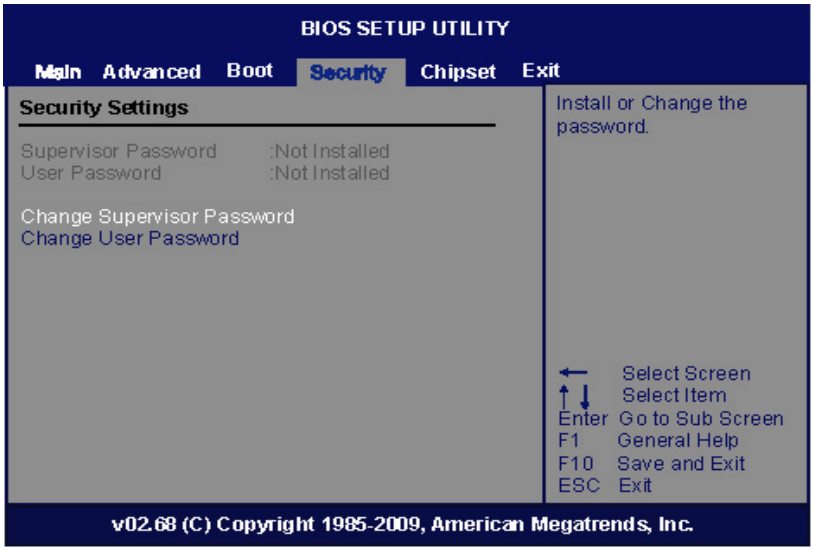
If this item is enabled, the system displays the message "Press DEL to run Setup" during POST.The default setting is *Enabled*.

- **Interrupt 19 Capture**

  If this item is enabled, this function makes the option ROMs to trap Interrupt 19. The default setting is Disabled.

3.6 Security Menu

The Security menu allows users to change the security settings for the system.



- **Supervisor Password**
  This item indicates whether a supervisor password has been set. If the password has been installed, Installed displays. If not, Not Installed displays.
- **User Password**
  This item indicates whether a user password has been set. If the password has been installed, Installed displays. If not, Not Installed displays.
- **Change Supervisor Password**
  Select this option and press <Enter> to access the sub menu. You can use the sub menu to change the supervisor password.
- **Change User Password**
  Select this option and press <Enter> to access the sub menu. You can use the sub menu to change the user password.

- **Boot Sector Virus Protection**

  This option is near the bottom of the Security Setup screen. The default setting is *Disabled*

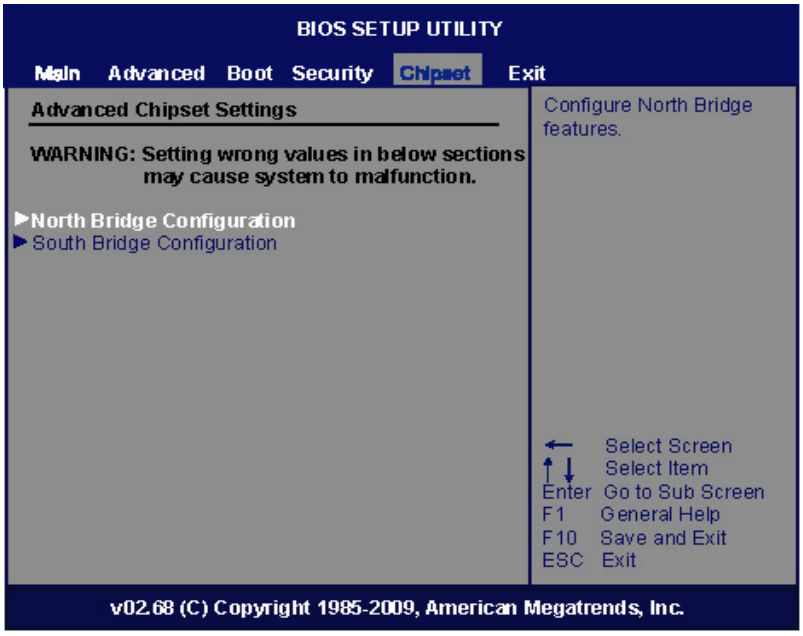
Disabled	Set this value to prevent the Boot Sector Virus Protection. This is the default setting.
Enabled	Select Enabled to enable boot sector protection. It displays a warning when any program (or virus) issues a Disk Format command or attempts to write to the boot sector of the hard disk drive. If enabled, the following appears when a write is attempted to the boot sector. You may have to type N several times to prevent the boot sector write. Boot Sector Write! Possible VIRUS: Continue (Y/N)? _ The following appears after any attempt to format any cylinder, head, or sector of any hard disk drive via the BIOS INT 13 Hard disk drive Service: Format!!! Possible VIRUS: Continue (Y/N)?

- **Chipset Menu**

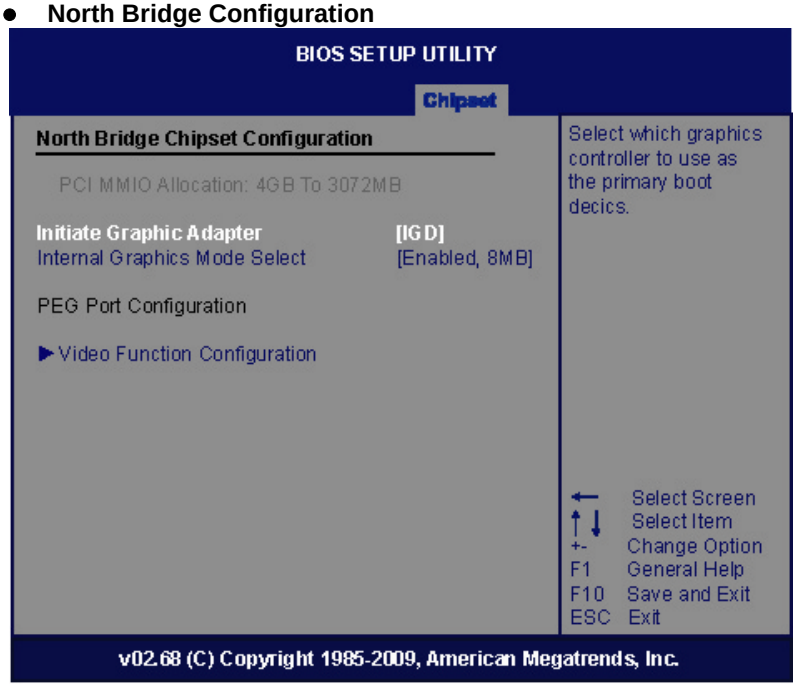
The Chipset menu allows users to change the advanced chipset settings. You can select any of the items in the left frame of the screen to go to the sub menus:

- North Bridge Configuration
- South Bridge Configuration

For items marked with "►", please press <Enter> for more options.


BIOS SETUP UTILITY
Main Advanced Boot Security Chipset Exit
Advanced Chipset Settings
WARNING: Setting wrong values in below sections may cause system to malfunction.
►North Bridge Configuration
►South Bridge Configuration
Configure North Bridge features.
Select Screen
Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
v02.68 (C) Copyright 1985-2009, American Megatrends, Inc.

- **North Bridge Configuration**


BIOS SETUP UTILITY
Chipset
North Bridge Chipset Configuration
PCI MMIO Allocation: 4GB To 3072MB
Initiate Graphic Adapter [IGD]
Internal Graphics Mode Select [Enabled, 8MB]
PEG Port Configuration
▶Video Function Configuration
Select which graphics controller to use as the primary boot decics.
Select Screen
Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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- **Initiate Graphic Adapter**

  When using multiple graphics cards, this item can select which graphics controller to be the primary display device during boot.

- **Internal Graphics Mode Select**

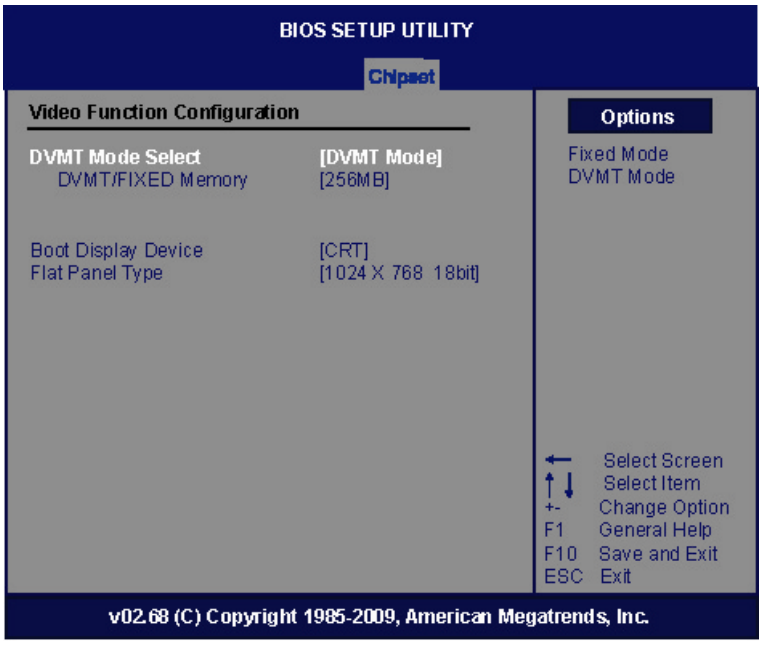
  This item allows you to select the amount of system memory used by the internal graphics device.

- **Video Function Configuration**

  Press <Enter> for the sub-menu for setting up video function.

➢ **Video Function Configuration**

You can press <Enter> for the sub-menu to set up video function.



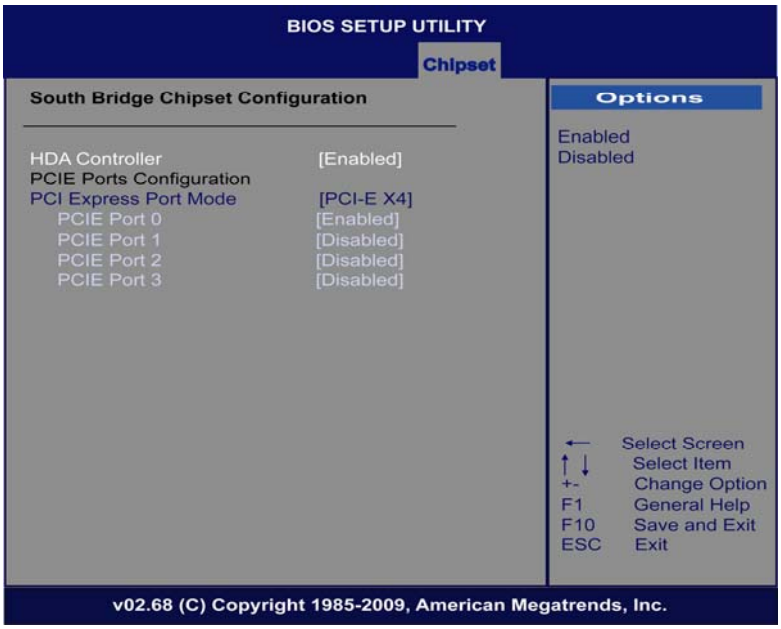
- **DVMT Mode Select**

  Allow you to select DVMT (Dianomic Video Memory Technology) mode and Fixed Mode.

- **DVMT/FIXED Memory**

  Allow you to allocate a fixed amount of system memory as graphics memory. Here are the options for your selection, 128MB, 256MB and Maximum DVMT

- **South Bridge Configuration**



- **HDA Controller**

  This item allows you to Enable or Disable the HD audio support.

- **PCIE Port Configuration**

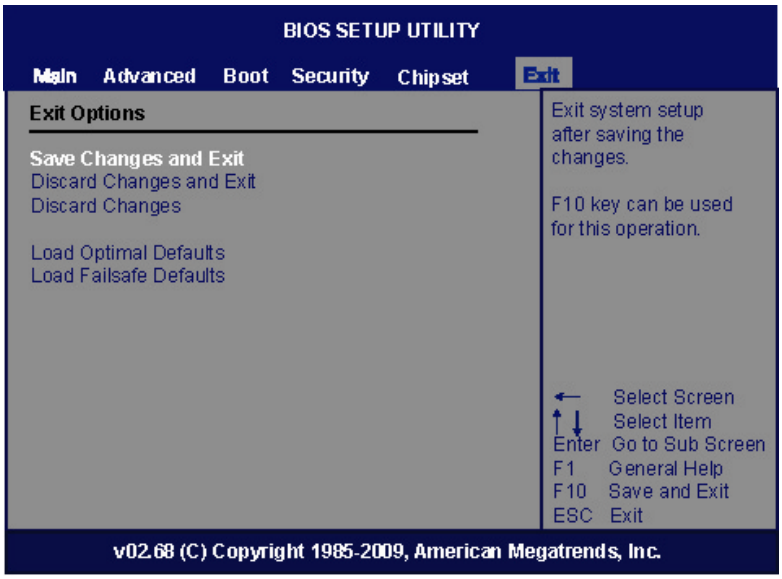
  This item allows you to set or disable the PCI Express Ports.

- **PCI Express Port Mode**

  This item allows choosing the X1 or X4 on PCIE 0 to PCIE3

3.7 EXIT Menu

The Exit menu allows users to load your system configuration with optimal or failsafe default values.



- **Save Changes and Exit**

  When you have completed the system configuration changes, select this option to leave Setup and reboot the computer so the new system configuration parameters can take effect. Select Save Changes and Exit from the Exit menu and press <Enter>. Select Ok to save changes and exit.

- **Discard Changes and Exit**

  Select this option to quit Setup without making any permanent changes to the system configuration. Select Discard Changes and Exit from the Exit menu and press <Enter>. Select Ok to discard changes and exit.

- **Discard Changes**

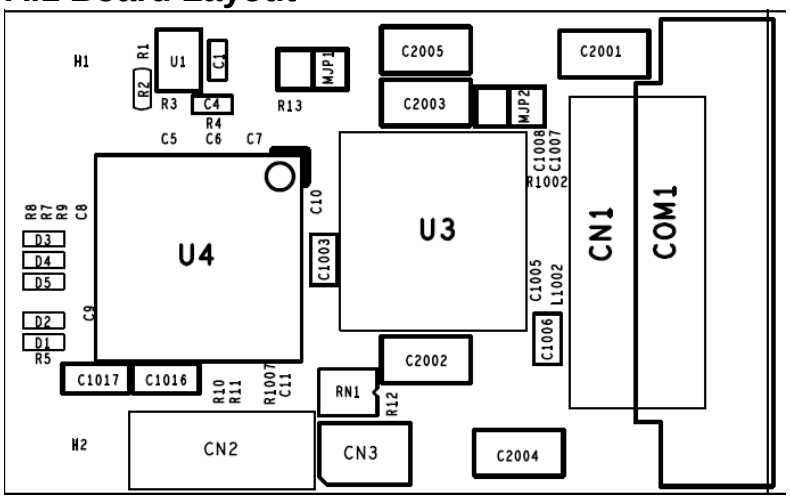
  Use this item to abandon all changes.

- **Load Optimal Defaults**
  It automatically sets all Setup options to a complete set of default settings when you select this option. The Optimal settings are designed for maximum system performance, but may not work best for all computer applications. In particular, do not use the Optimal Setup options if your computer is experiencing system configuration problems. Select Load Optimal Defaults from the Exit menu and press <Enter>.

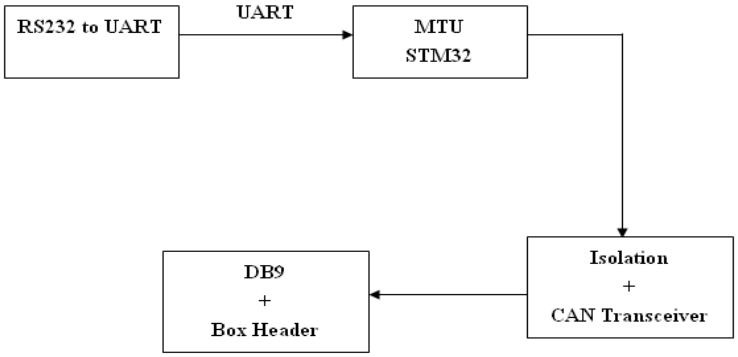
- **Load Fail-Safe Defaults**
  It automatically sets all Setup options to a complete set of default settings when you select this option. The Fail-Safe settings are designed for maximum system stability, but not maximum performance. Select the Fail-Safe Setup options if your computer is experiencing system configuration problems. Select Load Fail-Safe Defaults from the Exit menu and press <Enter>. Select Ok to load Fail-Safe defaults.

Appendix A
CAN BUS Module Introduce

A.1 Board Layout



A.2 Block Diagram



A.3 Connector Pin Define

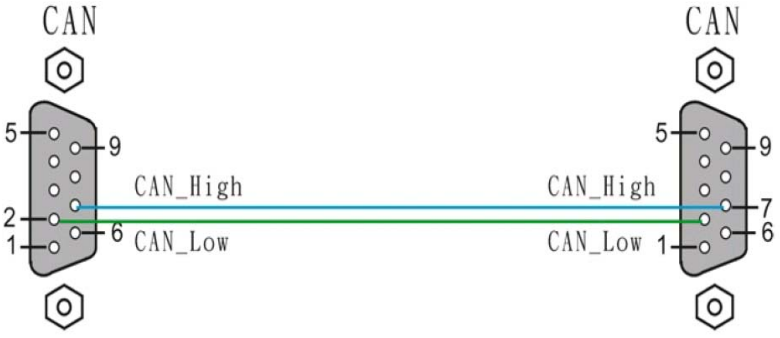
COM1

PIN	PIN Define
1	NC
2	CAN_L
3	CAN_GND
4	NC
5	NC
6	CAN_GND
7	CAN_H
8	NC
9	NC

CN2

PIN	PIN Define (USB)	PIN Define (RS232)	PIN	PIN Define
1	5V	5V	2	NC
3	USB_D-	TXD	4	CTS
5	USB_D+	RXD	6	RTS
7	NC	NC	8	NC
9	GND	GND	10	GND

Connection for CAN transmission



NOTE: ***To be sure there is, at least one side of the MJP2 have short. (This is 120ohm termination resistors)***